

KNOWLTON FARMS SOLAR DEVELOPMENT
43 ESTABROOK AVENUE
[PILOT PROJECT]

ASSESSOR'S MAP 49 - LOT 1
-APPLICATION FOR SPECIAL PERMIT-
-APPLICATION FOR SITE PLAN APPROVAL-

PLANS AND DESIGN HAVE BEEN DEVELOPED IN ACCORDANCE WITH
 THE PERFORMANCE STANDARDS SET FORTH
 IN SECTION 4.1 OF THE GRAFTON ZONING BYLAW &
 ARTICLE 36: STORMWATER MANAGEMENT BYLAW

LOCATED IN
GRAFTON, MASSACHUSETTS

DATE: JUNE 26, 2018
 REVISED: JULY 19, 2018
 REVISED: AUGUST 8, 2018

APPLICANT:

ESTABROOK VALLEY, LLC
 111 HUNTINGTON AVENUE
 BOSTON, MASSACHUSETTS 02199

RECORD OWNERS:

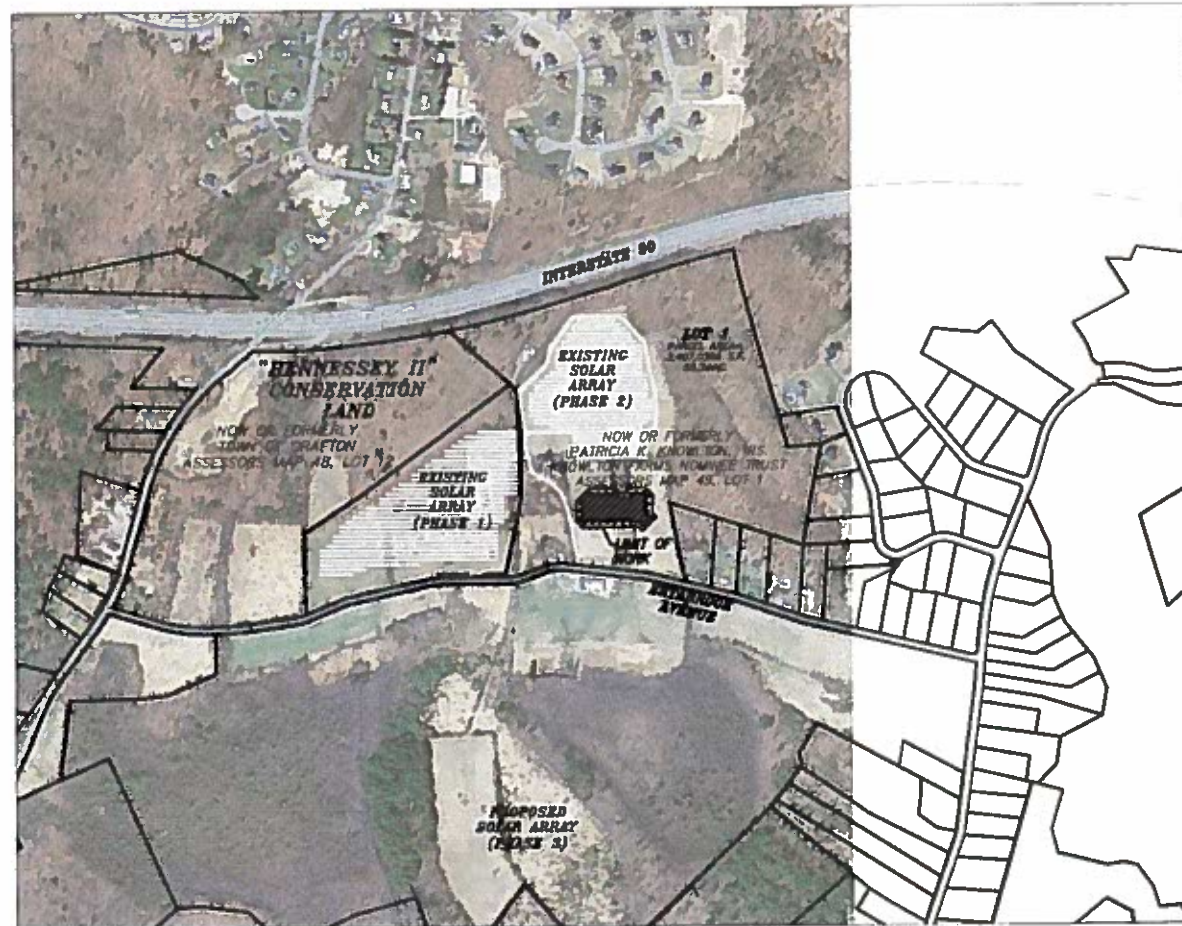
KNOWLTON FARMS NOMINEE TRUST
 PATRICIA K. KNOWLTON, TRS.
 43 ESTABROOK AVENUE
 GRAFTON, MASSACHUSETTS 01519

LAND SURVEYOR/SITE CIVIL ENGINEER:

MERIDIAN ASSOCIATES
 500 CUMMINGS CENTER BLVD. SUITE 100
 BEVERLY, MASSACHUSETTS 01915
 TEL: (978) 299-0441
 WWW.MERIDIANASSOC.COM

ENVIRONMENTAL CONSULTANT:

LEC
 LEC ENVIRONMENTAL CONSULTANTS, INC.
 100 GROVE STREET SUITE 302
 WORCESTER, MA 01605
 TEL: (508) 753-3077 FAX: (508) 753-3177
 WWW.LECENVIRONMENTAL.COM

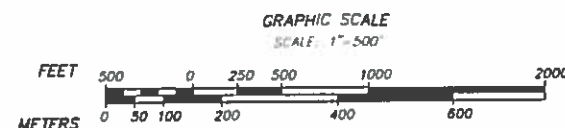


RECEIVED

AUG 9 2018

PLANNING BOARD
GRAFTON, MA

LOCUS CONTEXT MAP:



PROJECT SUMMARY:

THE PROJECT PROPOSES THE INSTALLATION OF 210 TABLES EACH CONTAINING 4 SOLAR PANELS FOR A TOTAL OF 840 SOLAR PANELS. THE SOLAR PANELS WILL BE INSTALLED AS AN ELEVATED CANOPY THAT WILL ALLOW AGRICULTURAL ACTIVITIES NAMELY, A COMBINATION OF LIGHT LIVESTOCK AND FOOD CROPS TO CONTINUE UNIMPEDED UNDER THE ARRAY (I.E. "DUAL-USE"). THE SOLAR ENERGY FACILITY WILL PRODUCE APPROXIMATELY 331 KILOWATTS DC (KWDC) OF POWER, AND 250 KILOWATTS AC (KWAC) OF POWER.

DRAWING INDEX:

- | | |
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| SHEET 1 | COVER SHEET & LOCUS CONTEXT MAP |
| SHEET 2 | RECORD CONDITIONS PLAN |
| SHEET 3 | PERMIT SITE PLAN OF LAND |
| SHEET 4 | SEDIMENT AND EROSION CONTROL DETAILS |
| SHEET 5 | SITE DETAILS |



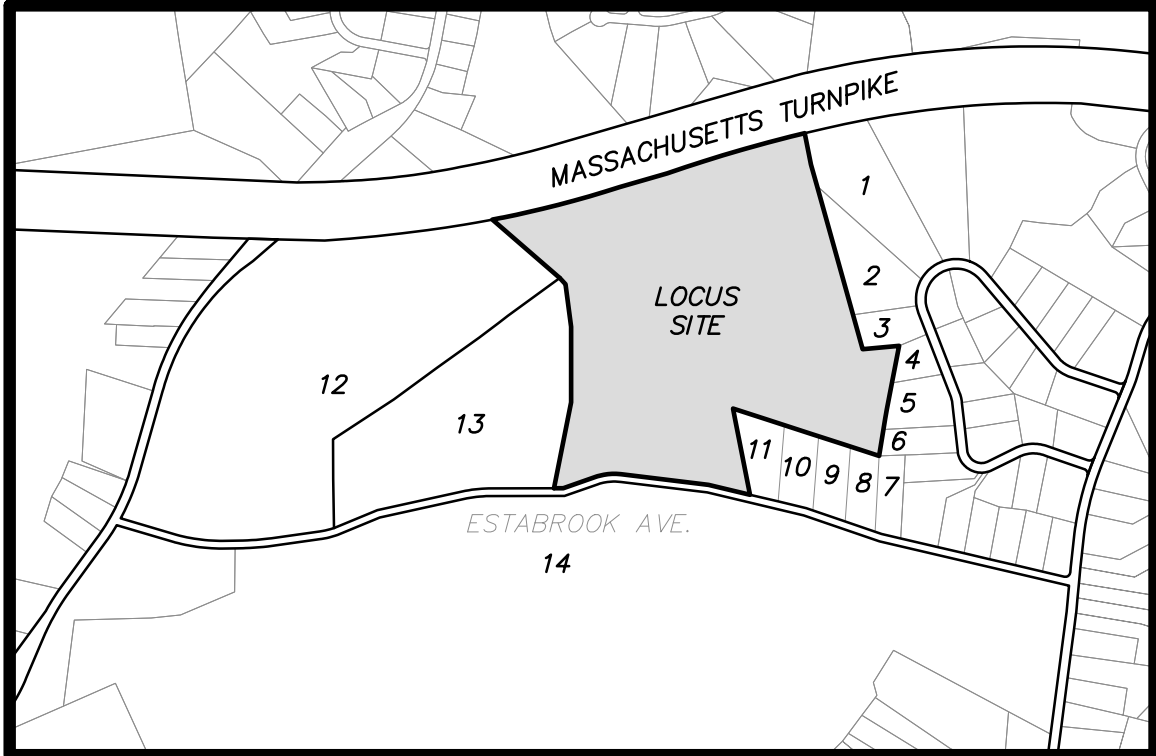
EXHIBIT 9

APPROVED BY:
 GRAFTON PLANNING BOARD

CLERK OF THE TOWN OF GRAFTON,
 MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF
 THIS PLAN BY THE GRAFTON PLANNING BOARD HAS BEEN RECEIVED AND
 RECORDED AT THE OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED
 DURING TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF
 SAID NOTICE.

"THIS PLAN IS SUBJECT TO A SPECIAL PERMIT DATED _____"
 "THIS PLAN IS SUBJECT TO SITE PLAN APPROVAL DATED _____"
 "THIS PLAN IS SUBJECT TO A CERTIFICATE OF OF GOOD STANDING DATED JUNE 21, 2018"

FOR PERMITTING ONLY,
 NOT FOR CONSTRUCTION



LOCUS MAP:
(SCALE: 1"=1000')

ABUTTER INFORMATION:
NOW OR FORMERLY

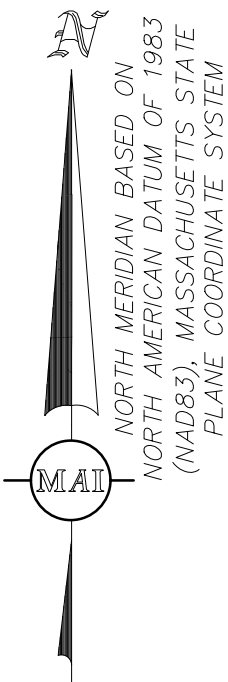
1. MAP 41/LOT 104 - JOSEPH DIROBERTO (23 VALLEY VIEW DRIVE)
2. MAP 41/LOT 103 - RICHARD URELLA (21 VALLEY VIEW DRIVE)
3. MAP 41/LOT 102 - STEVE SARDELLA (19 VALLEY VIEW DRIVE)
4. MAP 41/LOT 101 - FARID THANAWALLA (17 VALLEY VIEW DRIVE)
5. MAP 50/LOT 16 - MARTIN URBAN (15 VALLEY VIEW DRIVE)
6. MAP 50/LOT 15 - YONGHUA GIA (13 VALLEY VIEW DRIVE)
7. MAP 50/LOT 3F - WILLIAM MCNALLY (63 ESTABROOK AVENUE)
8. MAP 49/LOT 5 - CAROL WAHLGREN (61 ESTABROOK AVENUE)
9. MAP 49/LOT 4 - STEPHEN GOODSPEED (59 ESTABROOK AVENUE)
10. MAP 49/LOT 3 - KIM LORNA CHISSON (57 ESTABROOK AVENUE)
11. MAP 49/LOT 2 - WALDO SIMPSON (55 ESTABROOK AVENUE)
12. MAP 48/LOT 12 - TOWN OF GRAFTON (48 OLD WESTBORO ROAD)
13. MAP 49/LOT 1B - KNOWLTON FARMS NOMINEE TRUST (43 ESTABROOK AVENUE)
14. MAP 49/LOT 6 - KNOWLTON FARMS NOMINEE TRUST (43 ESTABROOK AVENUE)

LEGEND:

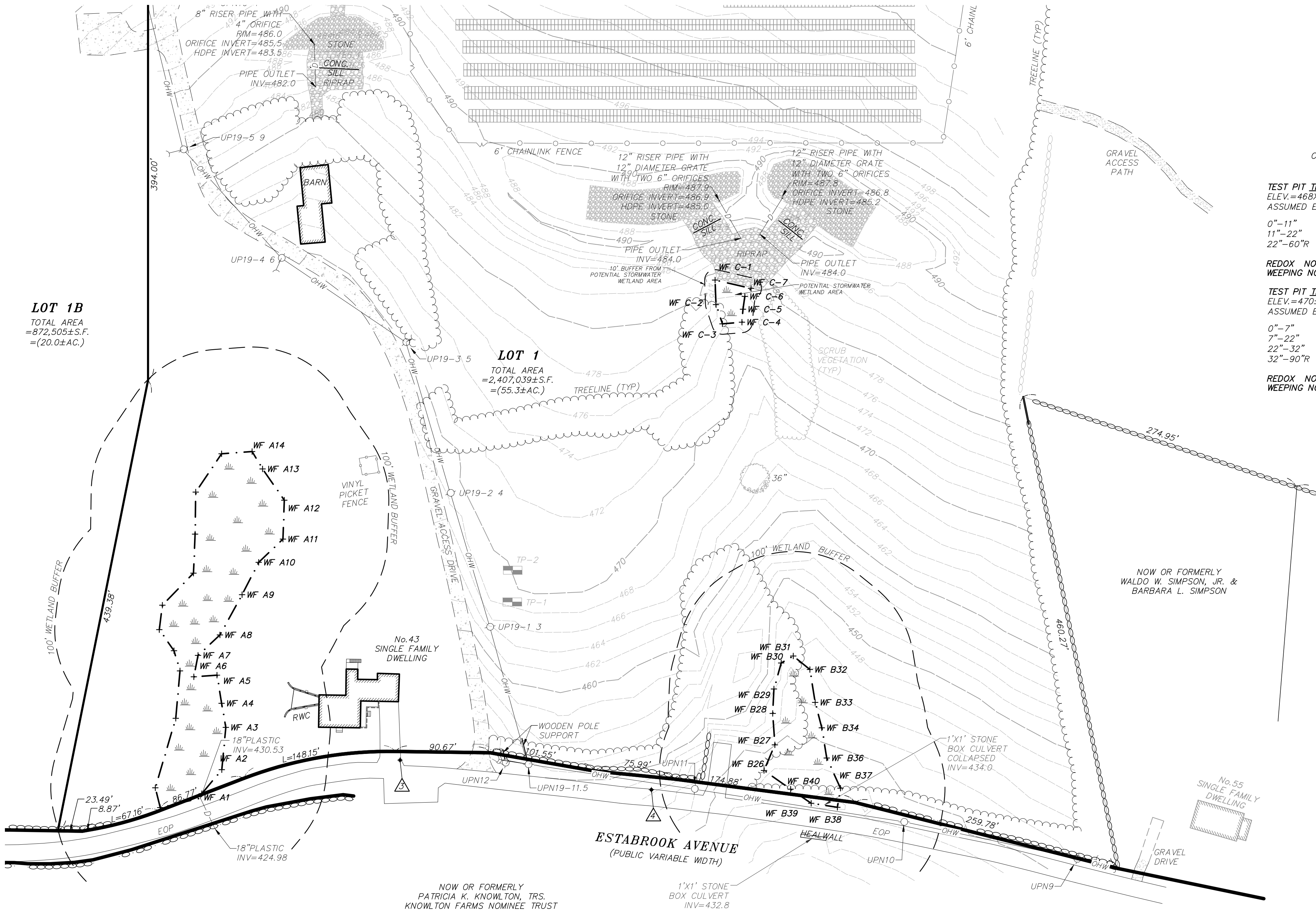
- 489 TWO FOOT CONTOUR
- 480 TEN FOOT CONTOUR
- +240.1 SPOT ELEVATION
- +WF C2 BORDERING VEGETATIVE WETLANDS
- WETLAND FLAG
- LIMIT OF BUFFER ZONE
- STONE LINE
- STONE WALL
- STONE WALL REMAINS
- STOCKADE FENCE
- CHAINLINK FENCE
- GRAVEL ACCESS
- DRAIN LINE
- OHW OVERHEAD WIRES
- GUY WIRE
- TERMINUS UNKNOWN
- UTILITY POLE
- ELECTRICAL HAND HOLE
- TYP TYPICAL
- EOP EDGE OF PAVEMENT
- CONC. CONCRETE
- ELEV. ELEVATION
- AC. ACRES
- S.F. SQUARE FOOT
- INV. INVERT
- L= LENGTH
- CLF CHAIN LINK FENCE
- RWC CONCRETE BLOCK RETAINING WALL

NOTES:

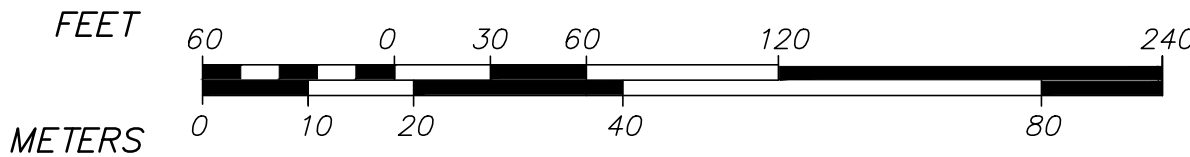
1. THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM AN INSTRUMENT SURVEY CONDUCTED ON THE GROUND BY MERIDIAN ASSOCIATES, INC. ON JUNE 5, 2018 AND SUPPLEMENTED WITH DATA FROM AUGUST 22, 2016, JULY 9, 2013 TO AUGUST 20, 2013 AND MAY 27, 2014 TO JULY 18, 2014.
2. THE SUBJECT PROPERTY DEPICTED IS LOCATED IN ZONE RESIDENTIAL (R40).
3. THE SUBJECT PROPERTY IS DEPICTED AS LOT 1 ON THE TOWN OF GRAFTON ASSESSOR'S MAP 49.
4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND COMPILATION OF PLANS OF RECORD. MERIDIAN ASSOCIATES, INC. DOES NOT WARRANTY NOR GUARANTEE THE LOCATION OF ALL UTILITIES DEPICTED OR NOT DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 1-888-344-7233.
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
6. THE ELEVATIONS DEPICTED HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND DERIVED WITH GPS OBSERVATIONS ON APRIL 1, 2013.
7. HORIZONTAL DATUM IS THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83) AS DERIVED FROM GPS OBSERVATIONS ON APRIL 1, 2013.
8. PROPERTY LINES DEPICTED HEREON ARE BASED ON COMPILED DEEDS AND PLANS OF RECORD. THIS PLAN IS NOT TO BE USED FOR THE RECONSTRUCTION OF BOUNDARY LINES OR FOR TITLE INSURANCE PURPOSES. ALL BOUNDARY LINES DEPICTED ARE APPROXIMATE ONLY. MAI DID NOT PERFORM A BOUNDARY RETRACEMENT SURVEY.
9. THE WETLAND FLAGS DEPICTED WERE DEMARCATED BY LEC ENVIRONMENTAL CONSULTANTS, INC. ON APRIL 1, 2013 AND MOST RECENTLY JUNE 6, 2014.
10. THE SOIL BORINGS DEPICTED HEREON WERE PERFORMED BY YOUNGMIN CHO, PHD, GEOLOGIST, OF GEOSYNTEC CONSULTANTS ON JUNE 25-26, 2014.
11. THE SUBJECT PROPERTY IS LOCATED IN FLOOD ZONE X (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, PER FEMA FLOOD INSURANCE RATE MAP NUMBER 25027C0831E DATED JULY 4, 2011.
12. THE SUBJECT SITE IS LOCATED WITHIN THE MISCOE, WARREN AND WHITEHALL WATERSHEDS AREA OF CRITICAL AND ENVIRONMENTAL CONCERN AS DESIGNATED BY THE MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION.



LOT 1B
TOTAL AREA
=872,505±S.F.
=(20.0±AC.)



GRAPHIC SCALE
SCALE 1"=60'



ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATON NOR SUBSURFACE VERIFICATION.

TEMPORARY BENCHMARK CHART:

T.B.M.#	DESCRIPTION	ELEVATION
△	MAGNETIC NAIL SET IN BITUMINOUS ROADWAY	446.12
△	MAGNETIC NAIL SET IN BITUMINOUS ROADWAY	446.83

(SEE NOTE 6)

UNOFFICIAL SOILS INFORMATION

DATE: JUNE 25, 2018
CONDUCTED BY: ANDREW RODRIGUEZ, SE (13890)

TEST PIT TP-1
ELEV.=468X±
ASSUMED E.S.H.G.W. ELEV.= DEEPER THAN 463±

0"-11" AP HORIZON: SANDY LOAM
11"-22" B HORIZON: FINE SANDY LOAM
22"-60"R LAYER C: GRAVELLY SANDY LOAM WITH COBBLES AND BOULDERS

REDOX NOT OBSERVED
WEeping NOT OBSERVED

TEST PIT TP-2
ELEV.=470±
ASSUMED E.S.H.G.W. ELEV.= DEEPER THAN 462.5±

0"-7" AP HORIZON: SANDY LOAM
7"-22" B HORIZON: FINE SANDY LOAM
22"-32" LAYER B/C: GRAVELLY SANDY LOAM WITH COBBLES AND BOULDERS
32"-90"R LAYER C: GRAVELLY SANDY LOAM WITH COBBLES AND BOULDERS

REDOX NOT OBSERVED
WEeping NOT OBSERVED

RECORD OWNER:

KNOWLTON FARMS NOMINEE TRUST
PATRICIA K. KNOWLTON, TRS.
43 ESTABROOK STREET
GRAFTON, MASSACHUSETTS 01519
- DEED BOOK 35401, PAGE 337 *
ASSESSORS MAP 49/LOT 1

REFERENCES:

- PLAN BOOK 177, PLAN 56 *
- PLAN BOOK 203, PLAN 82 *
- PLAN BOOK 291, PLAN 71 *
- PLAN BOOK 783, PLAN 102 *
- PLAN BOOK 784, PLAN 32 *
- PLAN BOOK 786, PLAN 9 *
- PLAN BOOK 786, PLAN 10 *
- PLAN BOOK 852, PLAN 77 *
- PLAN BOOK 903, PLAN 23 *

* DENOTES DOCUMENTS RECORDED AT THE WORCESTER DISTRICT REGISTRY OF DEEDS.

43 ESTABROOK AVENUE
RECORD CONDITIONS PLAN OF LAND
LOCATED IN
GRAFTON, MASSACHUSETTS
(WORCESTER COUNTY)

PREPARED FOR
ESTABROOK VALLEY, LLC
SCALE: 1"= 60' DATE: JUNE 26, 2018



MERIDIAN ASSOCIATES

500 CUMMINGS CENTER, SUITE 5950 69 MILK STREET, SUITE 302
BEVERLY, MASSACHUSETTS 01915 WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (978) 299-0447 TELEPHONE: (508) 871-7030
WWW.MERIDIANASSOC.COM

SHEET No. 2 OF 5 PROJECT No. 6108

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK'D
2	08/08/18	PEER REVIEW COMMENTS	DSK	DSK
1	07/19/18	POTENTIAL WETLAND	DSK	DSK

DWG. No. 6108-PILOT_REC

THE PROPOSED ACCESS PATHS SHALL BE VEGETATED USING "NEW ENGLAND CONSERVATION/WILDLIFE MIX", OR APPROVED EQUAL, AND IS INTENDED TO PROVIDE A LEVEL PATH OF TRAVEL FOR MAINTENANCE VEHICLES

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION

SEE SHEET 2 OF 5 FOR
GENERAL NOTES AND LEGEND

MODULES	AC POWER	DC POWER
840	250±KW	331±KW

NOTES:

- THE PROPOSED PROJECT WILL CONSIST OF A GROUND MOUNTED SOLAR FARM WITH AGRICULTURAL USES I.E. "DUAL-USE".
- THE PROPOSED PROJECT DOES NOT INCLUDE IMPERVIOUS AREAS OTHER THAN THE 220 SF CONCRETE PAD FOR THE ELECTRICAL EQUIPMENT. THE SITE IS PRESENTLY OPEN SPACE, AND WILL REMAIN AS OPEN SPACE WITH GROUND MOUNTED SOLAR PANELS.
- THERE IS NO PROPOSED PARKING AS THE SITE WILL ONLY BE ACCESSED FOR MAINTENANCE AND REPAIRS TO THE SOLAR PANELS AND EQUIPMENT. THERE WILL NOT BE PERSONAL ONSITE ON A REGULAR BASIS.
- THE SOLAR PANEL TABLES ARE TO BE LAID OUT AS TO PROVIDE SIXTEEN AND TWO-THIRDS (16.7) FEET OF CLEAR SPACE BETWEEN EACH ROW.
- IT IS ANTICIPATED THAT LESS THAN 1,000 CUBIC YARDS OF MATERIAL WILL NEED TO BE REMOVED FROM THE SITE, EXCLUDING VEGETATION NEEDED TO BE REMOVED AS A PART OF THE PROPOSED PROJECT.
- THE AREA OF THE SOLAR ARRAY, WITHIN THE FENCE, IS 2.55± ACRES.
- THE TOTAL PROJECT AREA IS 2.55± ACRES.
- THERE IS TO BE NO PARKING ALONG ESTABROOK AVENUE DURING THE CONSTRUCTION OF THE PROJECT.
- CONTRACTOR IS TO REFER TO AND COMPLY WITH THE OPERATION AND MAINTENANCE PROGRAM FOR #4 ESTABROOK AVENUE, PREPARED BY MERIDIAN ASSOCIATES DATED AUGUST 8, 2018.
- TRASH MAY COLLECT IN THE BMP'S, POTENTIALLY CAUSING CLOGGING OF THE FACILITIES. ALL DEBRIS AND LITTER SHALL BE REMOVED WHEN NECESSARY, AND AFTER EACH STORM EVENT, SEDIMENT AND DEBRIS COLLECTED SHOULD BE DISPOSED OF AT A PERMITTED WASTE DISPOSAL FACILITY. AVOID DISPOSING OF THIS MATERIAL ON SITE, WHERE IT COULD BE WASHED INTO THE PROPOSED SWALES AND BASINS.
- ANY ON-SITE WASTE INCLUDING WASTE PACKAGING AND IS TO BE PROPERLY STORED AND SECURED AS TO PREVENT WASTE FROM BEING BLOWN AROUND BY THE WIND.
- ALL UNUSED DEBRIS, SOIL, AND OTHER MATERIAL SHALL BE STOCKPILED IN LOCATIONS OF RELATIVELY FLAT GRADES, AWAY FROM ANY TREES IDENTIFIED TO BE SAVED AND UPGRADIENT OF THE HAYBALES. STOCKPILE SIDE SLOPES SHALL NOT BE GREATER THAN 2:1. ALL STOCKPILES SHALL BE SURROUNDED BY A ROW OF HAYBALES, AND SHALL BE PLACED OUTSIDE THE 100 FOOT BUFFER TO ANY BORDERING VEGETATED WETLAND. SURROUNDING HAYBALES SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS.

LEGEND:

646	TWO FOOT CONTOUR
710	TEN FOOT CONTOUR
---	BITUMINOUS BERM
---	GRANITE CURB
---	CONCRETE CURB
---	TREELINE
---	SCRUB LINE
---	STEEL GUARDRAIL
---	WIRE FENCE REMAINS
---	STONEWALL
---	EXPOSED ROCK OUTCROP
---	SPOIL PILE
---	SIGN
○	SHRUB
○	TREE
---	BORDERING VEGETATED WETLANDS
---	WETLAND FLAG
---	LIMIT OF BUFFER ZONE
---	OVERHEAD WIRES
---	ELECTRIC LINE
---	UTILITY POLE
---	GUY WIRE
---	ELECTRIC BOX
---	DRAIN MANHOLE
---	CATCH BASIN
---	BOULDER
---	TERMINUS UNKNOWN
BB	BIT. CONC.
CC	CONCRETE
EOP	EDGE OF PAVEMENT
GC	GRANITE CURB
UGE	UNDERGROUND ELECTRIC

PROPOSED LEGEND:

---	PROPOSED TREELINE
---	PROPOSED CONTOUR
---	PROPOSED CHAINLINK FENCE
---	PROPOSED WIRE MESH FENCE
---	PROPOSED UNDERGROUND ELECTRIC LINE
---	PROPOSED OVERHEAD WIRES
---	PROPOSED UTILITY POLE

NOW OR FORMERLY
WALDO W. SIMPSON, JR. &
BARBARA L. SIMPSON

No. 55
SINGLE FAMILY
DWELLING

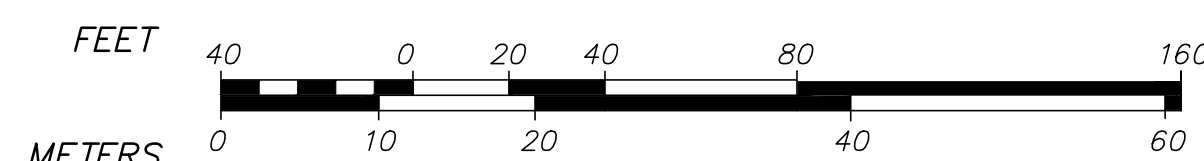
ESTABROOK AVENUE
(PUBLIC VARIABLE WIDTH)

SCHEDULE OF DIMENSIONAL CONTROLS

ZONING DISTRICT: LOW DENSITY RESIDENTIAL (R-40)

REQUIREMENT	REQUIRED	PROPOSED
LOT AREA:	40,000 S.F.	2,407,039±S.F. (55.3±AC.)
FRONTAGE:	140 FT.	610 FT.
FRONT YARD:	30 FT.	30 FT.
SIDE YARD:	15 FT.	15 FT.
REAR YARD:	15 FT.	15 FT.
BUILDING LOT COVERAGE:	30%	30%

GRAPHIC SCALE
SCALE: 1"=40'



REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK'D
2	08/08/18	PEER REVIEW COMMENTS	DSK	DSK
1	07/19/18	POTENTIAL WETLAND	DSK	DSK

DWG. No. 6108-PILOT-SITE

43 ESTABROOK AVENUE

PERMIT SITE PLAN OF LAND
LOCATED IN
GRAFTON, MASSACHUSETTS
(WORCESTER COUNTY)

PREPARED FOR
ESTABROOK VALLEY, LLC

SCALE: 1"= 40' DATE: JUNE 26, 2018

MERIDIAN ASSOCIATES

500 CUMMINGS CENTER, SUITE 5950 BEVERLY, MASSACHUSETTS 01915
69 MILK STREET, SUITE 302 WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (978) 299-0447 TELEPHONE: (508) 871-7030
WWW.MERIDIANASSOC.COM

SHEET No. 3 OF 5 PROJECT No. 6108

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NOTES:

- EXISTING GROUND WITHIN THE PROPOSED CHAINLINK FENCE SHALL BE CLEARED, STUMPED AND RE-GRADED TO ELIMINATE MINOR SURFACE DISTURBANCES. RE-VEGETATION OF THE SITE SHALL BE ESTABLISHED WITH LOW GROWTH GROUND COVER.
- THE PROPOSED LIMIT OF WORK LINE ALSO DEPICTS THE EXTENT OF TREE CLEARING TO BE PERFORMED ON THE PROJECT SITE. NO TREES OUTSIDE THE DESIGNATED LIMIT OF WORK LINE ARE TO BE REMOVED BY THE CONTRACTOR.
- COMMON FILL (SITE GRADING AREAS) SHALL CONSIST OF MINERAL SOIL SUBSTANTIALLY FREE FROM ORGANIC MATERIALS, LOAM, WOOD TRASH AND OTHER OBJECTIONABLE MATERIALS WHICH MAY BE COMPRESSIBLE OR WHICH CANNOT BE PROPERLY COMPACTED. SELECT COMMON FILL SHALL NOT CONTAIN STONES LARGER THAN 2-IN. IN LARGEST DIAMETER AND SHALL HAVE A MAXIMUM OF 25% PASSING THE NO. 40 SIEVE AND A MAXIMUM OF 20% PASSING THE NO. 200 SIEVE. SELECT COMMON FILL SHALL NOT CONTAIN GRANITE BLOCKS, BROKEN CONCRETE, MASONRY RUBBLE OR OTHER SIMILAR MATERIALS. IT SHALL HAVE PHYSICAL PROPERTIES SUCH THAT IT CAN BE READILY SPREAD AND COMPACTED DURING FILLING. SNOW, ICE AND FROZEN SOIL WILL NOT BE PERMITTED. SOIL EXCAVATED FROM THE STRUCTURE AREAS AND WHICH MEETS THE ABOVE REQUIREMENTS MAY BE USED.
- ORDINARY FILL SHALL BE WELL GRADED, NATURAL INORGANIC SOIL, FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIALS, FROZEN MATERIALS, AND OF STONES LARGER THAN TWO THIRDS (2/3) THE LIFT THICKNESS. IT SHALL BE OF SUCH NATURE AND CHARACTER THAT IT CAN BE COMPACTED TO THE SPECIFIED DENSITIES IN A REASONABLE LENGTH OF TIME. IT SHALL BE FREE OF PLASTIC CLAY, OF ALL MATERIALS SUBJECT TO DECAY, DECOMPOSITION, OR DISSOLUTION, AND OF CINDERS OR OTHER MATERIALS THAT WILL CORRODE PIPING OR OTHER METAL. IT SHALL HAVE A MINIMUM DRY DENSITY OF NOT LESS THAN 120 POUNDS PER CUBIC FOOT. MATERIAL FROM EXCAVATION ON THE SITE MAY BE USED AS ORDINARY FILL IF IT MEETS THE ABOVE REQUIREMENTS. ORDINARY FILL SHALL HAVE A MAXIMUM OF 60% PASSING THE #40 SIEVE, AND A MAXIMUM OF 20% PASSING THE #200 SIEVE. IT SHOULD NOT CONTAIN BROKEN CONCRETE, MASONRY RUBBLE OR OTHER SIMILAR MATERIALS, AND SHALL HAVE PHYSICAL PROPERTIES SUCH THAT IT CAN BE READILY SPREAD AND COMPACTED DURING FILLING. SNOW, ICE AND FROZEN SOIL SHALL NOT BE PERMITTED.
- SELECT COMMON FILL (ROADWAY AREAS) SHALL BE PLACED IN LAYERS HAVING A MAXIMUM THICKNESS OF 8 IN. MEASURED BEFORE COMPACTION. EACH LAYER OF FILL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY DETERMINED BY THE ASTM D1557. COMPACTION OF STRUCTURAL FILL SHALL CONSIST OF FULLY LOADED TEN WHEEL TRUCKS, A TRACTOR DOZER WEIGHING AT LEAST 30,000 LBS AND OPERATED AT FULL SPEED, A HEAVY VIBRATORY ROLLER, OR OTHER METHOD ONLY AS APPROVED BY THE ENGINEER. COMPACTION OF SELECT COMMON FILL IN CONFINED AREAS ADJACENT TO STRUCTURES SHALL BE ACCOMPLISHED BY HAND OPERATED VIBRATORY EQUIPMENT OR MECHANICAL TAMPERS APPROVED BY THE ENGINEER. AS A MINIMUM, COMPACTION OF SELECT COMMON FILL SHALL CONSIST OF FOUR COVERAGES OF THE APPROVED EQUIPMENT.

- SITE PREPARATION SHALL INCLUDE CLEARING, GRUBBING, DELETERIOUS SOILS, VEGETATION AND DEBRIS, ALL TREES, STUMPS, BRUSH, SHRUBS, ROOTS, GRASS, WEEDS, RUBBISH, STONES LARGER THAN 2-IN. IN THE LARGEST DIAMETER AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF FROM AREAS TO BE FILLED AND COMPACTED. AREAS OUTSIDE OF THE LIMITS OF WORK SHALL BE PROTECTED FROM DAMAGE AND NO EQUIPMENT OR MATERIALS SHALL BE STORED IN THESE AREAS. NO STUMPS, TREES, LIMBS, OR BRUSH SHALL BE BURIED IN ANY FILLS OR EMBANKMENTS.
- EROSION AND SEDIMENT CONTROL, BOTH DURING AND AFTER CONSTRUCTION, SHALL BE PROVIDED AS REQUIRED TO RETAIN SEDIMENT ONSITE, AND TO CONTROL EROSION OF EMBANKMENTS, TEMPORARY AND FINAL EXPOSED SLOPES, AND TEMPORARY MATERIAL STOCKPILE(S). SILT FENCES, CHECK DAMS, DRAINAGE DITCHES OR SWALES, TEMPORARY SEEDING, AND PRE-MANUFACTURED TEXTILES, GEOTUBES, GEORIG, CELLULAR GEOWEB, ETC., SHALL BE UTILIZED AS APPROPRIATE. EROSION AND SETTLEMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL PERMITS AND CODES AND THIS SPECIFICATION. DURING THE EXCAVATION OF THE WORK AT THE SITE, OPERATIONS SHALL BE CONTINUOUSLY MONITORED TO AVOID THE CREATION OF CONDITIONS THAT COULD LEAD TO EXCESSIVE EROSION SURFACE RUNOFF FROM THE WORK AREAS. CONTROLS SHALL BE PROVIDED TO PROTECT THE WATER QUALITY AND SHALL BE IN ACCORDANCE WITH PROJECT DOCUMENTS AND ALL LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO REDUCE EROSION OF SLOPES AND SILTATION OF OFF-SITE OUTFALLS AND TRIBUTARIES.
- UPON SIGNS OF CONCENTRATED FLOW BY EVIDENCE OF GULLYING OR RILLING IN DISTURBED AREAS, HAYBALES SHALL BE PLACED IN THESE AREAS, SPACED EVERY 50' IN THE UPGRADIENT SLOPE.
- ALL DISTURBED AREAS SHALL BE RE-ESTABLISHED WITH "NEW ENGLAND CONSERVATION/WILDLIFE MIX" OR APPROVED EQUAL.

ESTABLISHED GUIDELINES FOR NEW ENGLAND CONSERVATION/WILDLIFE MIX
NEW ENGLAND WETLAND PLANTS, INC.

GENERAL:
THE MIX PROVIDES A PERMANENT COVER OF GRASSES, WILDFLOWERS AND LEGUMES TO PROVIDE BOTH GOOD EROSION CONTROL AND WILDLIFE HABITAT VALUE. THIS MIX IS DESIGNED TO BE A NO MAINTENANCE SEEDING, AND IT IS APPROPRIATE TO CUT AND FILL SLOPES, DETENTION BASIN SLOPES, AND DISTURBED AREAS ADJACENT TO COMMERCIAL AND RESIDENTIAL PROJECTS. ALWAYS APPLY ON CLEAN BARE SOIL. THE MIX MAY BE APPLIED BY HYDRO-SEEDING, BY MECHANICAL SPREADER, OR ON SMALL SITES IT CAN BE SPREAD BY HAND. LIGHTLY ROLL TO ENSURE PROPER SEED TO SOIL CONTACT. BEST RESULTS ARE OBTAINED WITH A SPRING SEEDING. LATE SPRING THROUGH EARLY SUMMER SEEDING WILL BENEFIT WITH A LIGHT MULCHING OF WEED-FREE STRAW TO CONSERVE MOISTURE. IF CONDITIONS ARE DRIER THAN USUAL, WATERING WILL BE REQUIRED. LATE FALL AND WINTER DORMANT SEEDING REQUIRE AN INCREASE IN THE SEEDING RATE. FERTILIZATION IS NOT REQUIRED UNLESS THE SOILS ARE PARTICULARLY INFERTILE. PREPARATION OF A CLEAN WEED FREE SOIL SURFACE IS NECESSARY FOR OPTIMAL RESULTS.

SPECIES LIST:

- ELYMUS VIRGINICUS
- SCHIZACHYRIUM SCOPARIUM
- FESTUCA RUBRA
- ANDROPOGON GERARDII
- CHAMAECRISTA FASCICULATA
- PANICUM CLANDESTINUM
- PANICUM VIRGATUM
- SORGHASTRUM NUTANS
- HELENIUM AUTUMNALE
- HELIOPSIS HELIANTHOIDES
- VERBENA HASATA
- ASCLEPIAS SYRIACA
- ASTER UMBELLATUS
- EUPATORIUM PURPUREUM
- SOLIDAGO JUNCEA
- ZIZIA AUREA

SEED BED PREPARATION:

REMOVE ALL INVASIVE SPECIES, TILL EXISTING SOIL AND RAKE SMOOTH. APPLY 3" OF COMPOSTED LEAF LITTER. ALL AREAS WHERE ROOTS HAVE BEEN GRUBBED SHALL BE TILLED.

SEED APPLICATION AND RATE:

THE IDEAL PLANTING DEPTH IS 1/4"-1/2". UNDER IDEAL CONDITIONS SEEDS LAYING ON THE SURFACE WILL GERMINATE. RECOMMENDED APPLICATION RATE FOR SEEDING IS 1 LBS PER 1,750 SQUARE FEET.

SEEDING DATES:

FOR FALL INSTALLATION, SEED BETWEEN AUGUST 15 AND SEPTEMBER 10. FOR SPRING INSTALLATION, SEED AS EARLY AS POSSIBLE SOMETIME BETWEEN APRIL 15 AND MAY 10.

FERTILIZATION AND SOIL REQUIREMENTS:

REFER TO MANUFACTURERS RECOMMENDATIONS

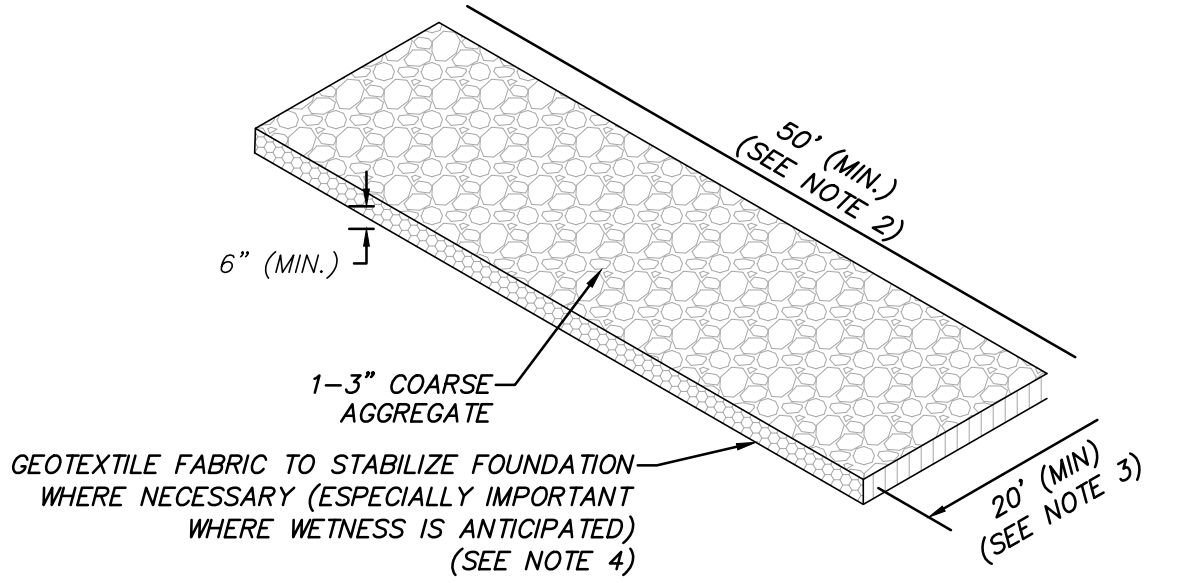
GENERAL MAINTENANCE:

REFER TO MANUFACTURERS RECOMMENDATIONS

ESTABLISHMENT:

REFER TO MANUFACTURERS RECOMMENDATIONS

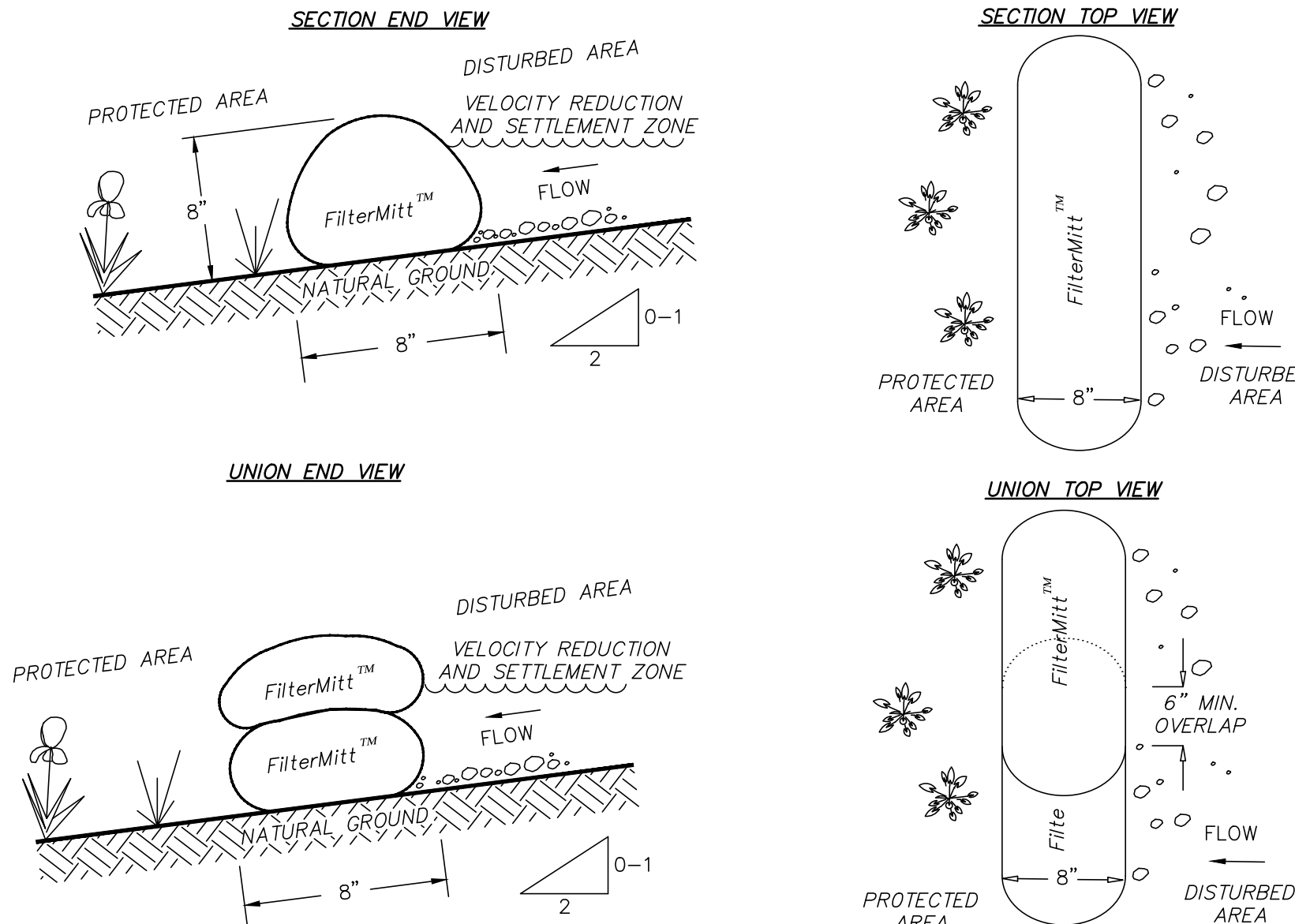
FOR PERMITTING ONLY
NOT FOR CONSTRUCTION



NOTES:

- THE SOLE PURPOSE OF THIS DETAIL IS TO PROVIDE A STABLE ENTRANCE AND EXIT FROM A CONSTRUCTION SITE OR WETLAND CROSSING AND KEEP MUD AND SEDIMENT OFF PUBLIC ROADS AND WETLANDS IN ACCORDANCE WITH THE RECOMMENDATIONS STATED IN THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" AS PREPARED BY THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION.
- EXTEND PAD BEYOND 50 FEET FOR HEAVY CONSTRUCTION TRAFFIC AS NECESSARY. LONGER ENTRANCES WILL PROVIDE BETTER CLEANING ACTION.
- THE PAD SHALL EXTEND THE FULL WIDTH OF THE CONSTRUCTION ACCESS DRIVE.
- WHERE NECESSARY, GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE FILL AND THE EARTH SURFACE BELOW THE PAD TO REDUCE THE MIGRATION OF SOIL PARTICLES FOR UNDERLYING SOIL INTO THE STONE AND VICE VERSA.

TEMPORARY GRAVEL CONSTRUCTION TRACKING PAD



FilterMitt™ COMPONENTS:

OUTSIDE CASING: 100% organic hessian.

FILLER INGREDIENT: FiberRoot Mulch™

- A BLEND OF COARSE AND FINE COMPOST AND SHREDDED WOOD.
- PARTICLE SIZES: 100% PASSING A 3" SCREEN; 90-100% PASSING A 1" SCREEN; 70-100% PASSING A 0.75" SCREEN; 30-75% PASSING A 0.25" SCREEN.
- WEIGHT: APPROX. 310 LBS./CU.YD. (AVE. 11.5 LBS./L.F.)

For more information visit:
www.groundscapecxpress.com or
contact us at:

Groundscapes Express, Inc.

P.O. Box 737
Wrentham, MA 02093
(508) 384-7140

FilterMitt™ 2:1 SLOPES OR LESS

(NOT TO SCALE)

FilterMitt™ INSTALLATION:

WITH THE NEWEST TECHNOLOGY AND EQUIPMENT, SECTIONS CAN BE CONSTRUCTED ON SITE IN LENGTHS FROM 1' TO 100'.

SECTIONS CAN ALSO BE DELIVERED TO THE SITE IN LENGTHS FROM 1' TO 8'.

THE FLEXIBILITY OF FilterMitt™ ALLOWS IT TO CONFORM TO ANY CONTOUR OR TERRAIN WHILE HOLDING A SLIGHTLY ROUND SHAPE AT 8" HIGH BY 8" WIDE.

WHERE SECTION ENDS MEET, THERE SHALL BE AN OVERLAP OF 6" OR GREATER.

East Coast
erosion control

Proud Member and Participant of:
www.eastcoasterosion.com
443 Bricker Road, Bernville, PA 19506
1.800.582.4005 +1.610.488.8496 Fax +1.610.488.8494

Material and Performance Specification

ECSC-2™ Double Net Straw/Coconut Rolled Erosion Control Product

Description:
The ECSC-2™ is made with uniformly distributed 70% agricultural straw, 30% coconut fiber and two polypropylene nets securely sewn together with degradable thread. The tightly compressed blankets are wrapped and include a product label, code and installation guide. The blankets are palletized for easy transportation. The ECSC-2™ has functional longevity of approximately 24 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 2:1 to 1:1 and low to medium flow channels. The ECSC-2™ meets Type 3.8 specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17.

Matrix:	1	2
Netting:	Type Top: Medium weight UV Stabilized Polypropylene Middle: None Bottom: Lightweight Photodegradable Polypropylene	Net Color Green
Net Opening:	Top 0.5" x 0.5"	Middle Bottom 0.75" x 0.75"
Thread:	Type Degradable Thread	Color White
Roll Sizes:	Standard	A Size Mega
Width:	7.5 ft. 2.3 m	3.75 ft. 1.1 m
Length:	120 ft. 36.6 m	240 ft. 73.2 m
Weight ±10%:	57 lbs. 25.9 kg	57 lbs. 25.9 kg
Area:	100 yd² 83.6 m²	100 yd² 83.6 m²
#/Pallet:	20	9

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	9.00 oz/yd² 305.1 g/m²
Thickness	ASTM D6525	0.30 in. 7.62 mm
Tensile Strength-MD	ASTM D6818	178 lb/ft 2.60 kN/m
Elongation-MD	ASTM D6818	31 %
Tensile Strength-TD	ASTM D6818	148 lb/ft 2.16 kN/m
Elongation-TD	ASTM D6818	22.4 %
Light Penetration	ASTM D6567	13 %
Density / Specific Gravity	ASTM D792	N/A %
Water Absorption	ASTM D1117	436 %

*May differ depending upon raw material variations

Bench-Scale Testing* (MTPEP):**

Test Method	Parameters	Results
ECTC Method 2 Rainfall	50mm (2in) / hr-30 min	SLR**=8.52
	100mm (4in) / hr-30 min	SLR**=11.01
	150mm (6in) / hr-30 min	SLR**=14.28
ECTC Method 3 Shear Resistance	Shear at .50 in/ soil loss	2.16 lb/ft²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	503 %

*Bench scale tests should not be used for design purposes.
**Soil Loss Ratio=Soil Loss Bare Soil/Soil Loss with RECP+1-C Factor
***The preceding test data excerpts were reproduced with the permission of AASHTO, however, this does not constitute endorsement or approval of the product, material or device by AASHTO.

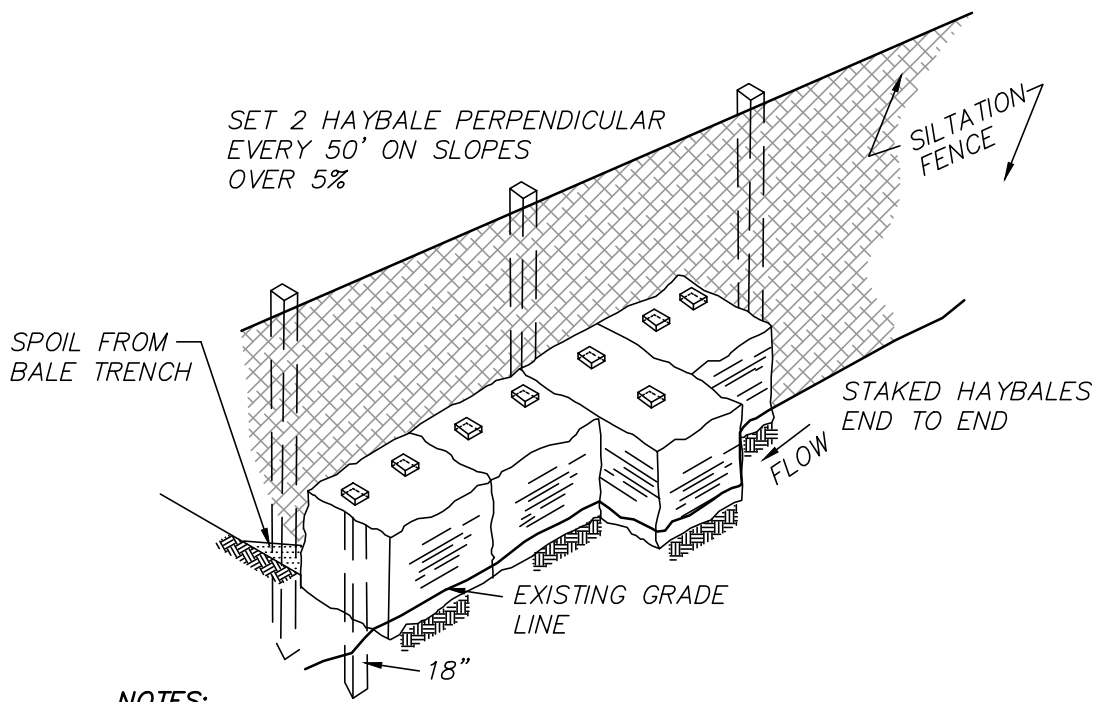
Channel Performance Design Values*:

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	2.25 lbs/ft² 107.73 Pa
Unvegetated Velocity	ASTM D 6460	8.0 ft/s 2.44 m/s
Vegetated Shear Stress	NA	N/A lbs/ft² N/A Pa
Vegetated Velocity	NA	N/A ft/s N/A m/s
Manning's N (Value Represents a Range)		0.029

*Large-Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

The values presented are for guidance purposes and do not constitute the practice of engineering. East Coast Erosion Control LLC (ECCEB) warrants that at the time of manufacture all information presented herein is accurate and reliable and fully within the ECCEB manufacturing product specification parameters. If the product does not meet the stated values and ECCEB is notified in writing prior to installation, the product will be replaced at no cost to the purchaser. ECCEB will not be held liable for any type of damage or losses, directly or indirectly, for failure of this product. Current revision supersedes all previous versions for this product.

Revised 12/2014



NOTES:

- BALES TO BE TIED WITH ORGANIC FIBER TWINE ONLY NO PLASTIC OR WIRE.
- HAYBALES TO BE SECURED WITH A MINIMUM OF TWO (2) 1" x 1" WOODEN STAKES PER BALE DRIVEN 18" MIN. INTO GRADE.

HAYBALE WITH SILT FENCE BARRIER

(NOT TO SCALE)

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK'D
1	07/19/18	POTENTIAL WETLAND	DSK	DSK

DWG. No. 610B_PILOT-DET

GENERAL SEQUENCE OF CONSTRUCTION:

- CONTACT DIGSAFE (888.344.7233) AND OBTAIN CLEARANCE AT LEAST 72 HOURS BEFORE INITIATING ANY EXCAVATION.
- ESTABLISH PHASE I EROSION AND SEDIMENTATION CONTROL MEASURES (HAYBALES & SILT FENCE) AS DEPICTED HEREIN AND AROUND AREAS OF DISTURBANCE AND MAINTAIN THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH LOCAL REQUIREMENTS. PERFORM INSPECTIONS, REPAIR IF NECESSARY, AND DOCUMENT AFTER EACH PRECIPITATION EVENT OF 0.25-INCHES OR GREATER.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONSTRUCT THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PAD AT BOSTON POST ROAD. THE PAD SHALL CONSIST OF 1"-3" COARSE AGGREGATE WITH MINIMUM DIMENSIONS OF 50' (LENGTH) x 20' (WIDTH) x 6" (DEPTH) AND SET ON GEOTEXTILE FABRIC TO STABILIZE FOUNDATION (ESPECIALLY IMPORTANT WHERE WEETNESS IS ANTICIPATED).
- PERFORM LIMITED CLEARING ACTIVITIES IN ORDER TO CONSTRUCT GRAVEL ACCESS DRIVE AND TURNAROUND.
- SITE PREPARATION SHALL INCLUDE CLEARING AND REMOVAL OF EXISTING VEGETATION AND DEBRIS. ALL TREES, STUMPS, BRUSH, SHRUBS, ROOTS, GRASS, WEEDS, RUBBISH, BITUMINOUS PAVEMENT, STONES LARGER THAN 2-IN. IN THE LARGEST DIAMETER AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF FROM AREAS TO BE FILLED AND COMPACTED. AREAS OUTSIDE OF THE LIMITS OF WORK SHALL BE PROTECTED FROM DAMAGE. NO STUMPS, TREES, LIMBS, OR BRUSH SHALL BE BURIED IN ANY FILLS OR EMBANKMENTS.
- CONSTRUCT SEDIMENTATION BASINS (SHOWN ON PLANS).
- GRUBBING OF AREAS WITHIN THE PROPOSED FENCE AND GRADING AREAS ONLY SHALL BE CONDUCTED AFTER THE INSTALLATION OF THE SEDIMENTATION BASIN.
- FOR AREAS WHERE NO GRADING IS PROPOSED, REPAIR UNEVEN AREAS WITHIN LIMITS OF THE SOLAR DEVELOPMENT, AS NECESSARY TO CREATE A TOLERABLE GROUND SURFACE. GENERAL TOLERANCE FOR ALLOWABLE GROUND SLOPE IS TWO FOOT VERTICAL CHANGE OVER A 20 FOOT HORIZONTAL RUN [NOTE THAT THIS REFERS TO THE ALLOWABLE LONGITUDINAL SLOPE (I.E., ALONG THE CONTOUR) AND NOT THE INCLINATION OF THE EXPOSURE (I.E., PERPENDICULAR TO THE CONTOUR)].
- UPON SIGNS OF CONCENTRATED FLOW BY EVIDENCE OF GULLYING OR RILLING IN DISTURBED AREAS, HAYBALES, OR APPROVED EQUAL, SHALL BE PLACED IN THESE AREAS, SPACED EVERY 50' IN THE UPGRADIENT SLOPE.

PHASE II:

- ESTABLISH PHASE II EROSION AND SEDIMENTATION CONTROL MEASURES (HAYBALES & SILT FENCE) AS DEPICTED HEREIN AND AROUND AREAS OF DISTURBANCE AND MAINTAIN THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH LOCAL REQUIREMENTS. PERFORM INSPECTIONS, REPAIR IF NECESSARY, AND DOCUMENT AFTER EACH PRECIPITATION EVENT OF 0.25-INCHES OR GREATER (PHASE I EROSION CONTROL IS TO REMAIN IN PLACE AND MAINTAINED AS DESCRIBED ABOVE).
- REPEAT STEPS 5, 6, 7, 8 AND 9 ABOVE FOR PHASE II.
- RECEIVE AND STAGE MATERIALS. RE-LOCATE COMPONENTS (E.G., CONDUIT, WIRING AND POSTS) TO SOLAR DEVELOPMENT AREA AS THEY ARE REQUIRED.
- INSTALL RACKING SYSTEM, MOUNT THE PV PANELS ON FRAME AT THE SPECIFIED ORIENTATION AND EXPOSURE (TO BE PROVIDED BY PROJECT MEP PRIOR TO CONSTRUCTION).
- RUN UNDERGROUND ELECTRICAL CONDUIT TO PV FRAMES AND INSTALL PANEL WIRING. (LOCATION TO BE PROVIDED BY PROJECT MEP PRIOR TO CONSTRUCTION)
- INSTALL PV COMBINER BOXES WITH FLEXIBLE CONNECTIONS TO CONNECT PV PANELS TO CONDUIT. (LOCATION TO BE PROVIDED BY PROJECT MEP PRIOR TO CONSTRUCTION)
- CONSTRUCT CONCRETE EQUIPMENT PADS. INSTALL AND CONNECT GROUND MOUNTED ELECTRICAL EQUIPMENT. A DISCONNECT LOCATION WILL BE ON THE OUTSIDE ON THE NARROWEST SIDE OF THE PLATFORM.
- RUN CONDUIT FROM THE CONCRETE EQUIPMENT PADS TOWARDS THE POINT OF INTERCONNECTION AS DEPICTED ON THE SITE PLAN.
- INSTALL RISER POLES AND UTILITY POLES WITH ELECTRICAL COMPONENTS AND OVERHEAD WIRING FROM THE POINT OF INTERCONNECTION TO THE ARRAY.
- CONSTRUCT ALL 7' HIGH CHAIN LINK FENCE AND GATES. (SHOWN ON PLAN)
- ALL DISTURBED AREAS SHALL BE RE-ESTABLISHED WITH "NEW ENGLAND CONSERVATION/WILDLIFE MIX" (DEPICTED HEREIN). IN THE EVENT THAT THE SEEDING FALLS OUTSIDE OF THE RECOMMENDED SEEDING DATES, DISTURBED AREAS SHALL BE RE-ESTABLISHED USING ALTERNATIVE METHODS AS APPROVED BY THE PROJECT SITE ENGINEER.
- REMOVE ANY ACCUMULATED SEDIMENT FROM THE SEDIMENTATION BASINS. THE SEDIMENTATION BASINS ARE TO BE LINED WITH RIPRAP AND REMAIN IN PLACE AFTER CONSTRUCTION.
- RE-PAVE THE BITUMINOUS CONCRETE AT THEN ENTRANCE TO THE SITE. (SHOWN ON PLANS)
- UPON COMPLETION OF CONSTRUCTION ACTIVITIES WITHIN THE LIMIT OF WORK, THE CONTRACTOR SHALL EFFECTIVELY AND PERMANENTLY STABILIZE THE SITE.

43 ESTABROOK AVENUE

EROSION AND SEDIMENT CONTROL DETAILS
LOCATED IN
GRAFTON, MASSACHUSETTS
(WORCESTER COUNTY)

PREPARED FOR
ESTABROOK VALLEY, LLC
SCALE: AS NOTED DATE: JUNE 26, 2018

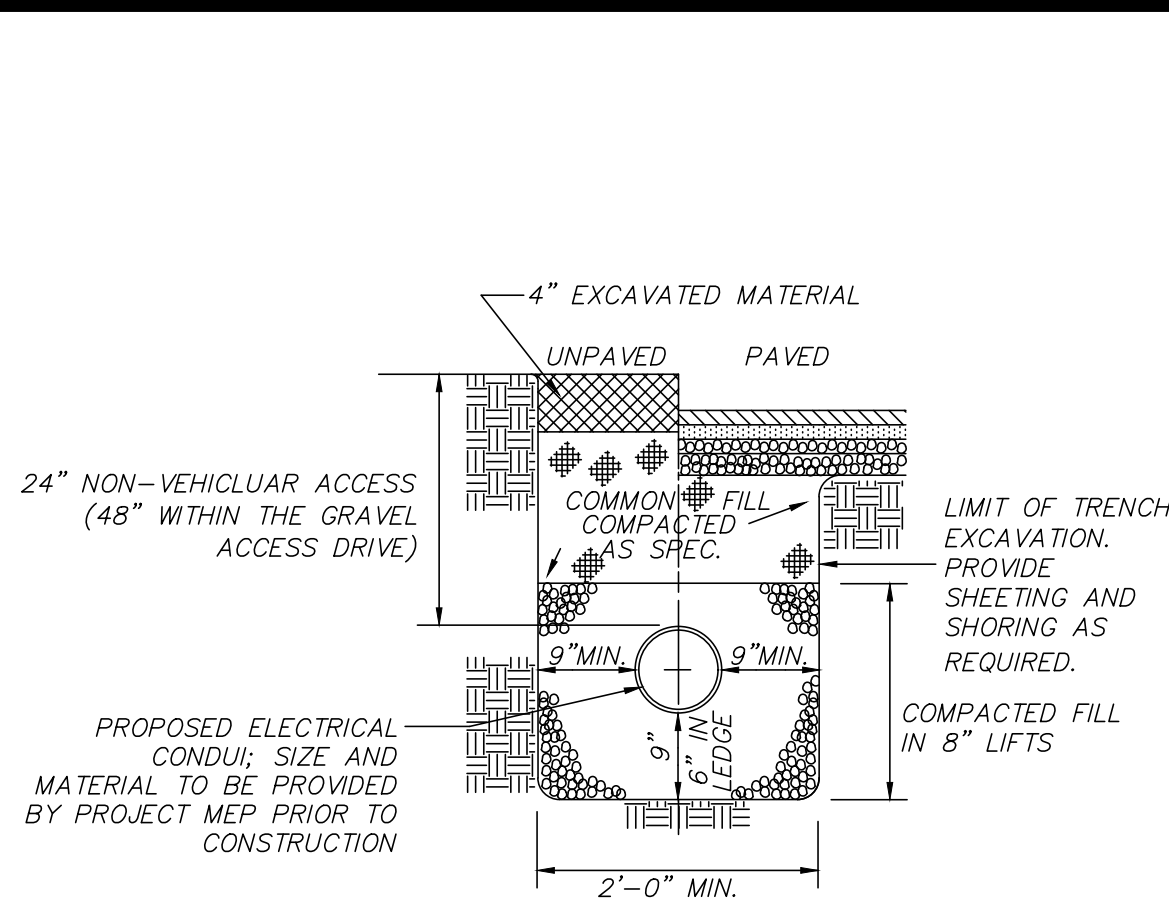


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SHEET No. 4 OF 5 PROJECT No. 610B

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FILL SPECIFICATION

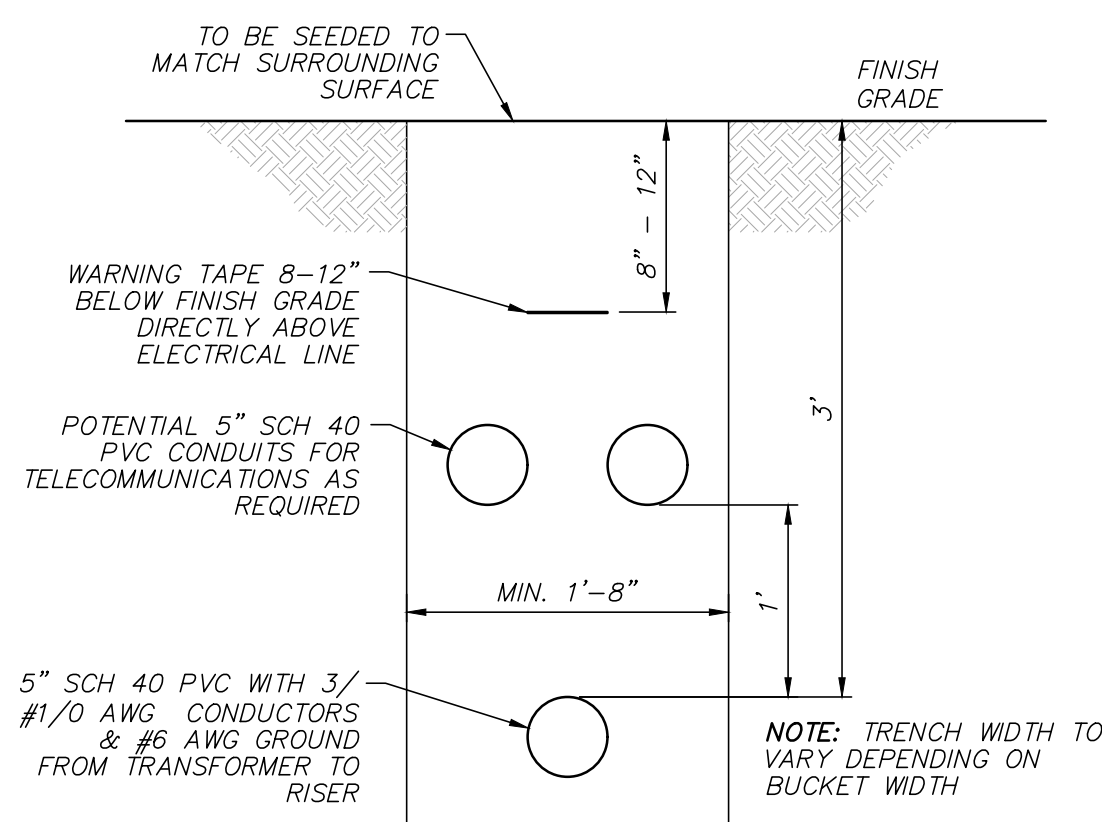
FINE AGGREGATE SHALL CONSIST OF HARD, DURABLE SAND, FREE OF CLAY, ORGANIC MATTER, SURFACE COATINGS, AND OTHER DELETERIOUS MATERIALS. SOIL FINER THAN THE No. 200 SIEVE (THE FINES) SHALL BE NONPLASTIC. FINE AGGREGATE FILL SHALL CONFORM TO THE REQUIREMENTS OF THE 1988 MASS. HIGHWAY DEPT. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, SECTION M4.02.02A (2010 SUPPLEMENTAL SPECIFICATIONS). FINE AGGREGATE SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE SIZE	PERCENT PASSING BY WEIGHT
3/8 INCH	100
No. 4	95 - 100
No. 16	45 - 80
No. 50	10 - 30
No. 100	2 - 10
No. 200 (FINES)	0 - 3

FINE AGGREGATE FILL SHALL BE COMPACTED IN MAXIMUM 9-INCH-THICK LOOSE LIFTS TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557 (MODIFIED AASHTO COMPACTION)

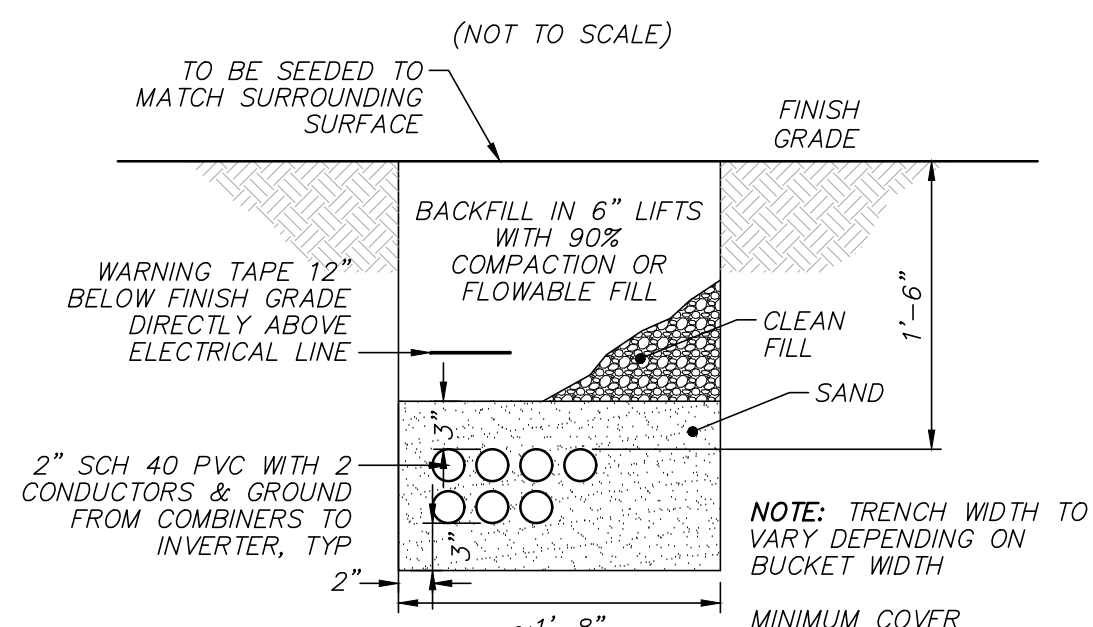
TYPICAL CONDUIT TRENCH DETAIL

(NOT TO SCALE)



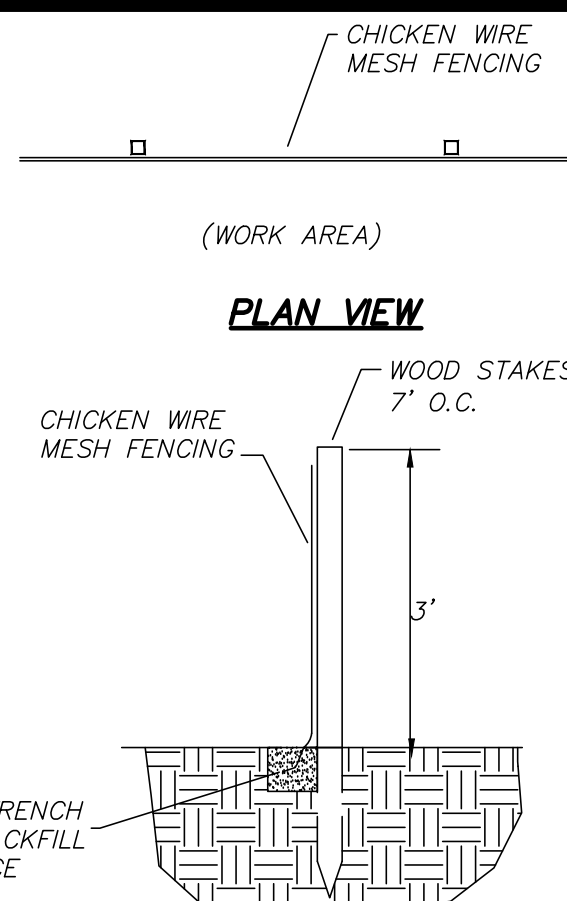
TYPICAL AC CONDUIT TRENCH DETAIL

(NOT TO SCALE)



TYPICAL DC CONDUIT TRENCH DETAIL

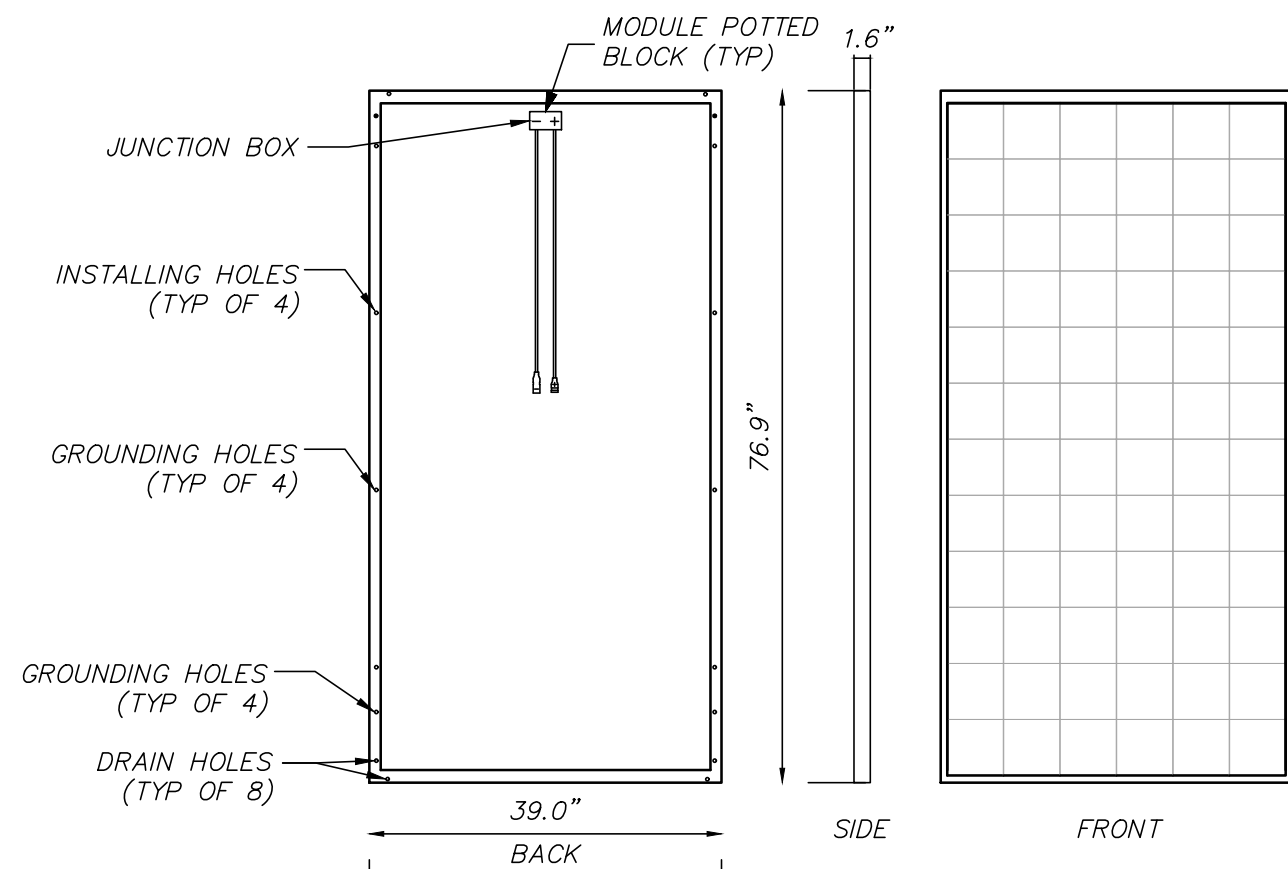
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CROSS SECTION

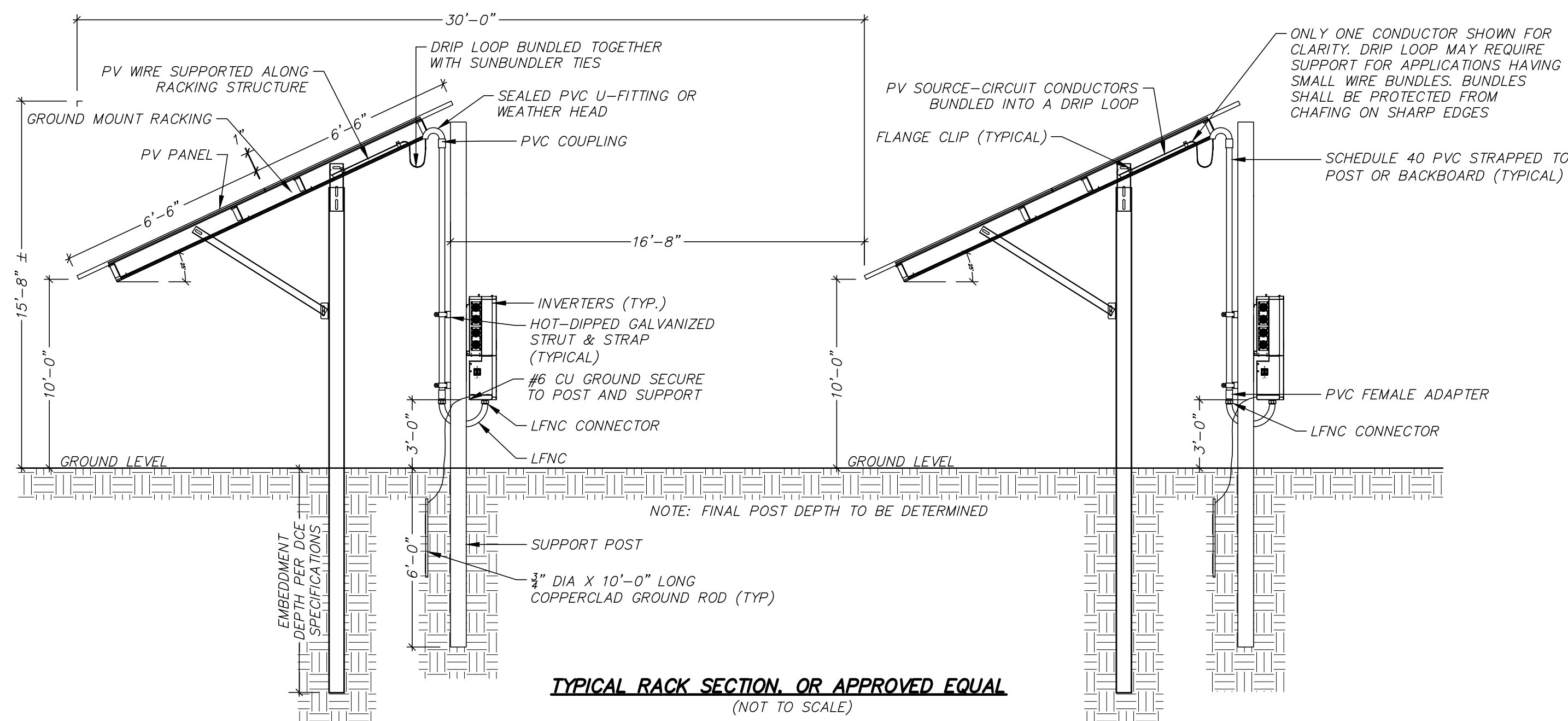
WIRE MESH FENCE DETAIL

(NOT TO SCALE)



TYPICAL PV MODULE OR APPROVED EQUAL

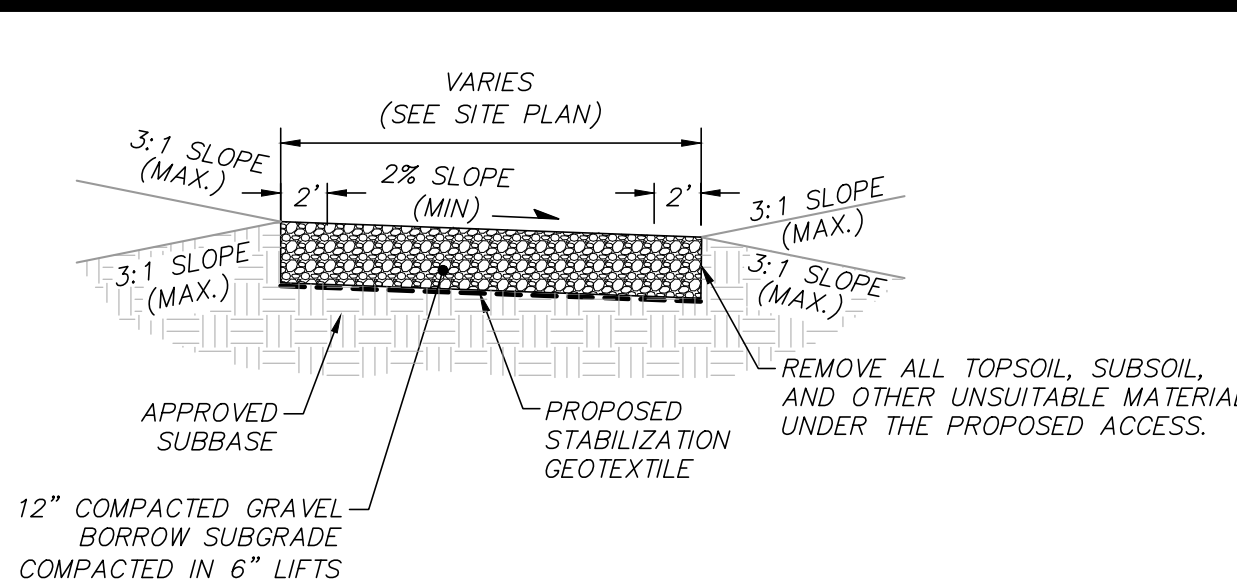
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TYPICAL RACK SECTION OR APPROVED EQUAL

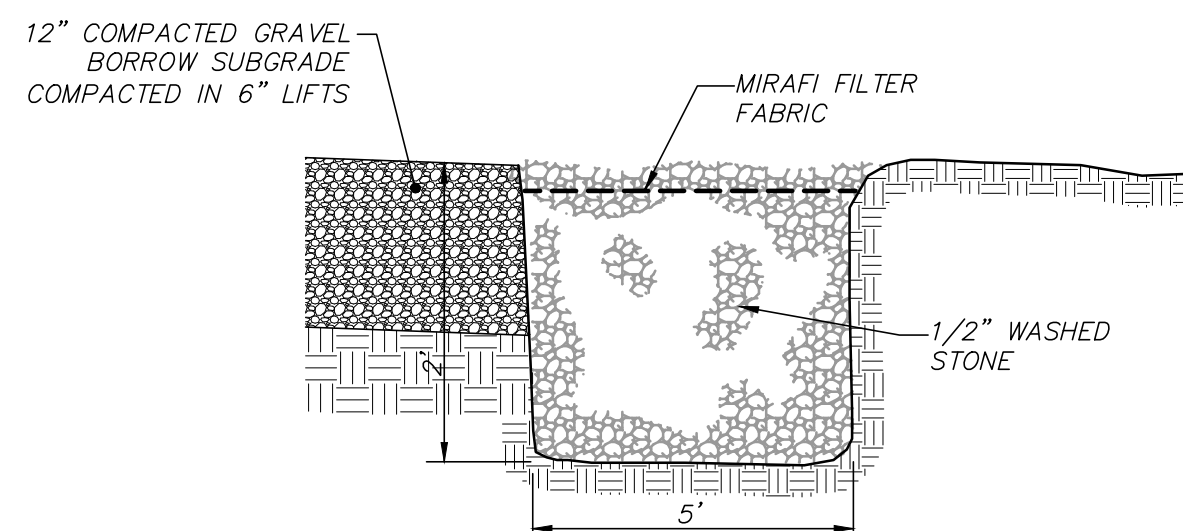
(NOT TO SCALE)

PLANTING MAINTENANCE NOTES:
LANDSCAPING SHALL BE PROPERLY MAINTAINED, ANY DEAD OR DISEASED PLANTINGS SHALL BE REPLACED IN THE NEXT IMMEDIATE SPRING OR FALL PLANTING SEASON.



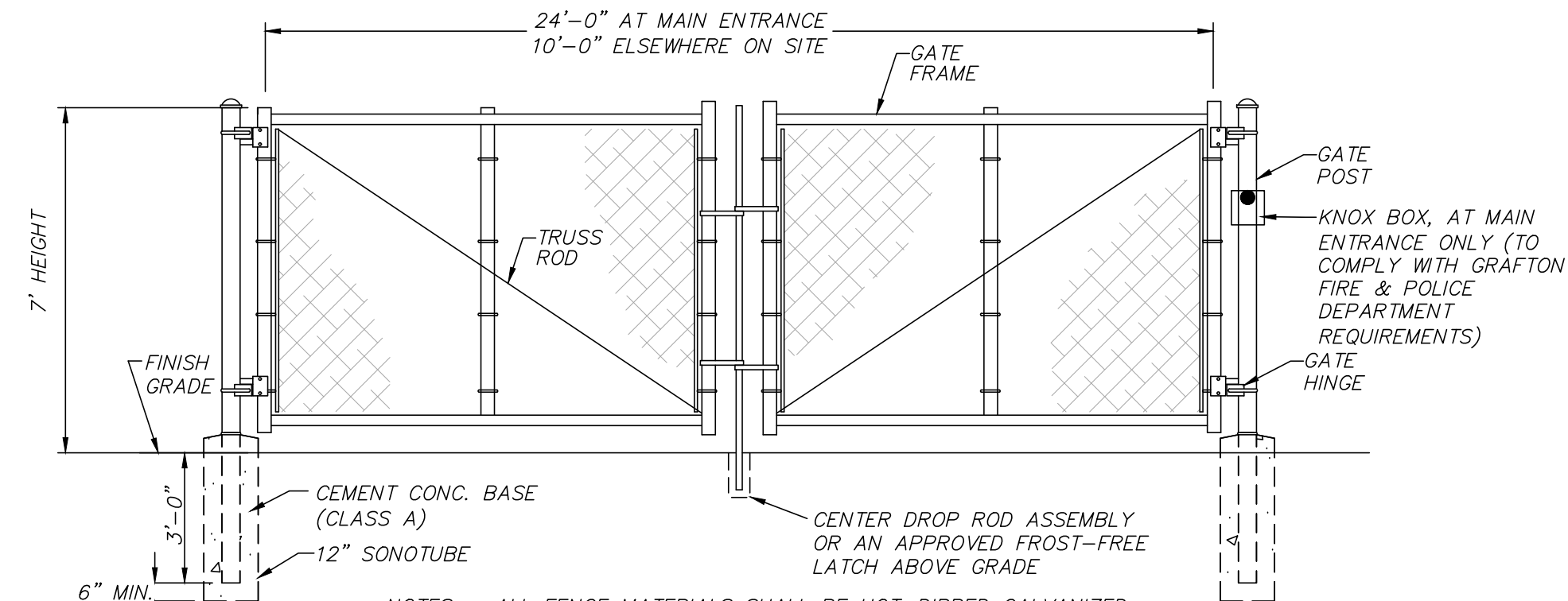
TYPICAL GRAVEL ACCESS DRIVE CROSS SECTION

(NOT TO SCALE)



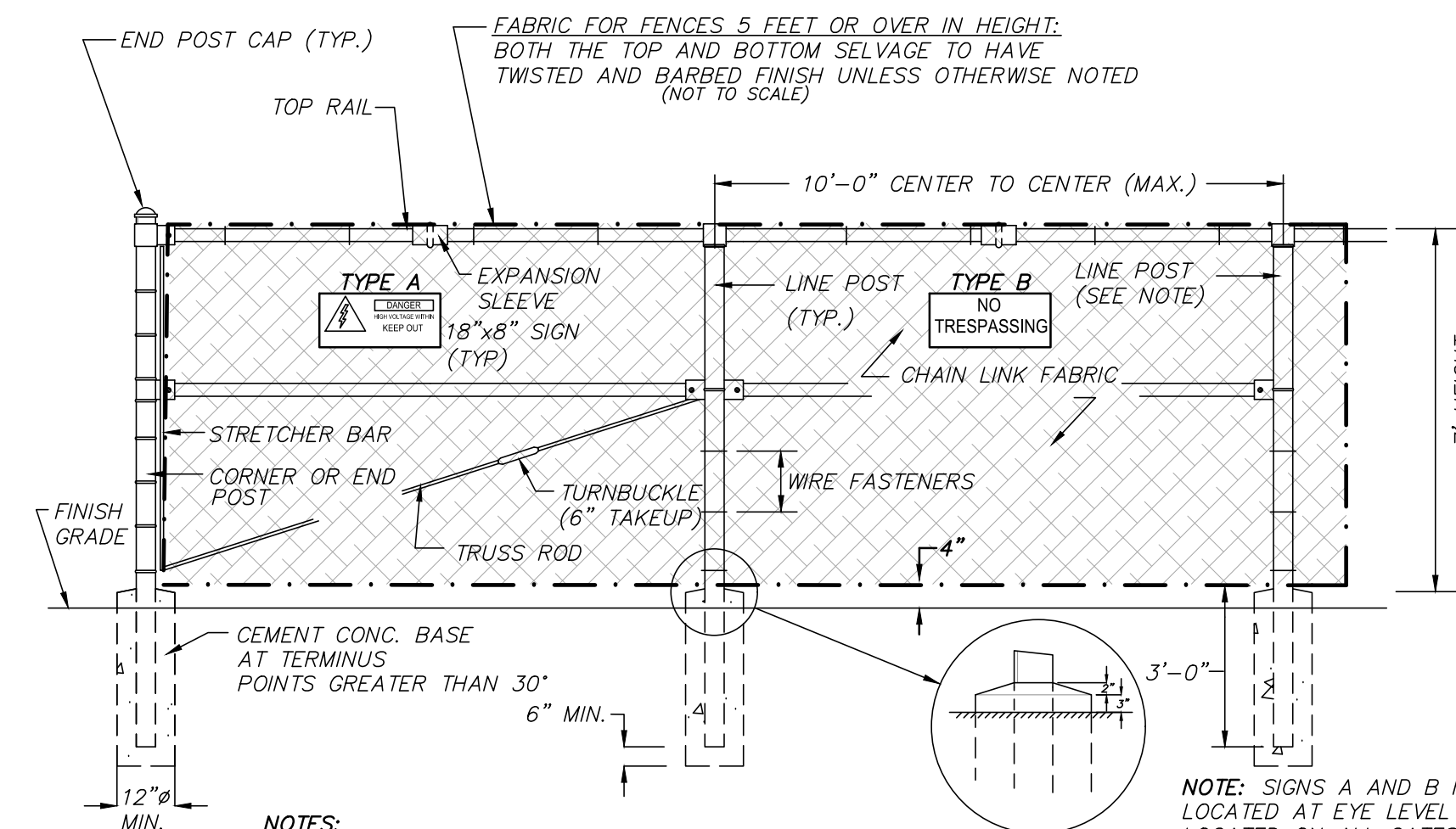
GRAVEL STONE TRENCH DETAIL

(NOT TO SCALE)



TYPICAL CHAIN LINK DOUBLE-SWING VEHICLE GATE

(NOT TO SCALE)



NOTES:

- ALL FENCE MATERIALS SHALL BE HOT-DIPPED GALVANIZED
- PERIMETER FENCING SHALL BE RAISED 4" OFF OF FINISHED GRADE.

AFFIX APPROPRIATE COMPANY OWNER NAME AND CONTACT INFO DECAL TO BOTH SIGNS A AND B.

TYPICAL CHAIN LINK FENCE W/ TOPRAIL DETAIL OR APPROVED EQUAL

(NOT TO SCALE)

43 ESTABROOK AVENUE

SITE DETAILS
LOCATED IN
GRAFTON, MASSACHUSETTS
(WORCESTER COUNTY)

PREPARED FOR
ESTABROOK VALLEY, LLC
SCALE: AS NOTED DATE: JUNE 26, 2018

MERIDIAN ASSOCIATES

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SHEET No. 5 OF 5 PROJECT No. 6108

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK'D
2	08/08/18	PEER REVIEW COMMENTS	DSK	DSK
1	07/19/18	POTENTIAL WETLAND	DSK	DSK

DWG. No. 6108_P10T-DT